



Government Services Integration Cluster
Digital Enterprise Engagement Practice (DEEP)

Digital First Assessment MPBSD - ServiceOntario: Enabling Chat Solutions Mid-beta DA-433

GSIC-DEEP, ServiceOntario, MTO



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Agenda

- ODS - Intros and back-office announcements
- DEEP – Update and Background
- DEEP – Demo to share Live Chat
- Break
- Q&A continued

Problem Statements

Original chatbot

- **How might we** create an improved experience for the public seeking information on Driver and Vehicle Licensing Services (D&V) services that curates trusted answers and is available 24/7.

Current Live Chat

- **How might we improve** the experience in the current D & V chatbot for the people who are looking to quickly self-service for information, or to get reassurance on what they find online about Driver and Vehicle services.

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What has changed since we last connected?

- **New project name** - MPBSD - ServiceOntario: Enabling Chat Solutions
- **D&V Chatbot is now managed by ServiceOntario** and DEEP and ITS provide support and guidance
- **ServiceOntario** and **DEEP** are partners for Live Chat (Phase II), with SO leading the implementation and **DEEP** leading the technical and DFA components.
- **Transformation in GSIC and we are now the Digital Enterprise Engagement Practice (DEEP)** - working beyond contact centres and focusing on new ways to engage the public
- **New sponsor** – ADM, Nelson Loureiro of Customer Care – with a strong focus to digital
 - Customer care is building their digital team and project team and **lead the timing of Live Chat implementation**
- **Transformation and election with updated mandates**
 - ODS get a welcome to our new Ministry of Public and Business Service Delivery

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Background

- With the scope of Driver and Vehicle Services, Chatbot piloted from January 2021 until February of 2022 when ServiceOntario assumed operational management
- The purpose is to help Ontarians looking for Driver and Vehicle information by providing immediate access to answers they are looking for, as well the reduction in the volume of calls to the contact centre, increasing contact centre capacity for more complex calls and new business.
- It allows people to ask a quick question (non-personal), or select a button with a commonly asked question, to get a simple fast answer with latest information on driver and vehicle products and services.
- Live Chat was planned to follow the Chatbot, both research and the pilot confirm the desire for Live agent, and ODS/DEEP now requires Live Chat with Chatbot.
- The Live Chat implementation date will be determined by ServiceOntario who are in the planning stages right now

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Approach

- The focus of this **current update is Live Chat technical** and to **operationalize the chatbot** with ServiceOntario.
- **Chatbot is now managed** in the Change Management and Implementation team in the ADMO for Customer Care in ServiceOntario.
- **DEEP has prepared and tested the technology for Live Chat**, integrating the current chatbot (IBM Watson) with queueing capabilities to get to a Live Agent.
 - Already have and use with other clients like ITS ServiceDesk with EVA (Chatbot & Live Chat) and Employment Ontario with Live Chat
- **The enterprise design standard for chat solution was used.**
 - **Developed with ODS and DEEP** over the last few years and has involved many rounds of user research, and learning from the chatbot pilot
- **Our sponsor has committed resources** – they are here today and will step in as **the Live Chat PM lead** the for operational and content development and implementation in partnership with GSIC-DEEP

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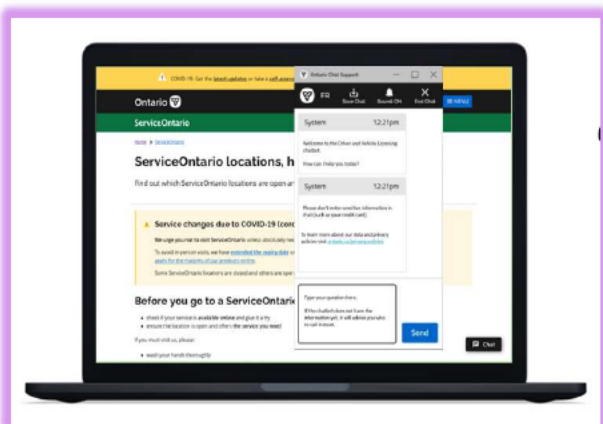
Milestones

- January 21, 2021 – Launched Chatbot on one webpage F/E
- April 08, 2021 – Fully launched on five webpages F/E
- December 2, 2021 – ServiceOntario PMO for Live Chat project
- January 2022 – Scope change Technology preparedness for Live Chat with SO resource constraints
- February 28, 2022 – ServiceOntario assumed ownership of the chatbot
- April 1, 2022 – ServiceOntario launched Two webpages - sticker refund F/E (approved)
- May 2022 – ODS led user research on the Live Chat technology
- May 2022 – Live Chat technical component up to system integration testing completed
- June 2022 – Re-engaged ServiceOntario and Resources assigned for planning

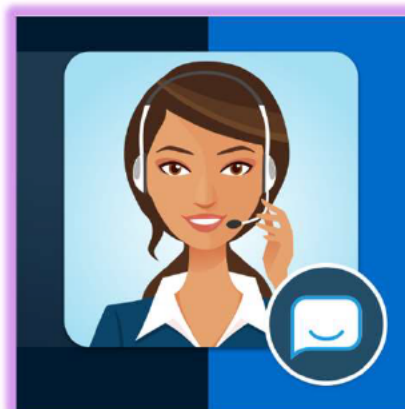
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Chat engagement from Chatbot to Live Chat - Demonstration



Citizen Experience



Agent Experience

1. Understanding Users and Their Needs 1

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Question - Will there be user testing with live agent scripts?

- There has been testing in UAT with the DEEP testing team to ensure the technology is working
- **Yes** - there will be more testing as part of the testing plan to be created by DEEP and ServiceOntario for this next phase of this work - plans to test this with public before launch will be included

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1. Understanding Users and Their Needs 2

Question - Do you see current SO contact centre agents as users? How will they be engaged in this process?

- **Live Chat** - We can see agents from the contact centre, both public and hotline, as well as in-person CSRs as candidates for agents for live chat, noting there are some specific skill sets:
 - Excellent written communication and typing
 - Quick to respond and source information
 - Excellent etiquette and empathy
 - Quick to learn technology and subject
- **Live Chat** - ServiceOntario will involve subject matter experts in the build of their process and content
- **Chatbot** - agents have been at the table for both issues and design for chatbot as subject matter experts and continue to contribute

2. Establish the Right Team 1

Question - Who will be responsible for conducting continued user testing and evaluation after Live?

- ServiceOntario is the business owner and will manage new business in partnership with DEEP who support technology
- Evaluation and measurement is captured in a dashboard and ServiceOntario has two measurement teams that can monitor this work

Currently

- Chatbot team monitors the success of chatbot responses – issues are noted and shared
- ServiceOntario is developing a testing group for work like this on their digital team
- DEEP can provide project support for new queues, programs for chat (ie. Health)

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1. Understanding Users and Their Needs 1

(GSiC)

Question - Will there be using testing with live agent scripts?

- There has been testing in UAT with the DEEP testing team to ensure the technology is working
- Yes - there will be more testing as part of the testing plan to be created by DEEP and ServiceOntario for this next phase of this work - plans to test this with public before launch will be included

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2. Establish the Right Team 2

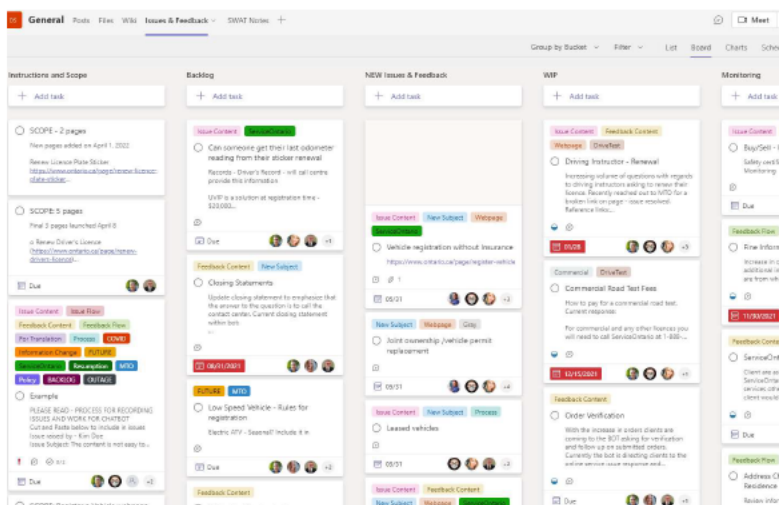
Question - Do you have UX skills on the team?

- DEEP – Has been leading the build
- The design was done in partnership over the past 3 years with ODS UX designers
- We have a few people with UX skills, we are gaining maturity, and working with ODS and **ServiceOntario will have their own people**

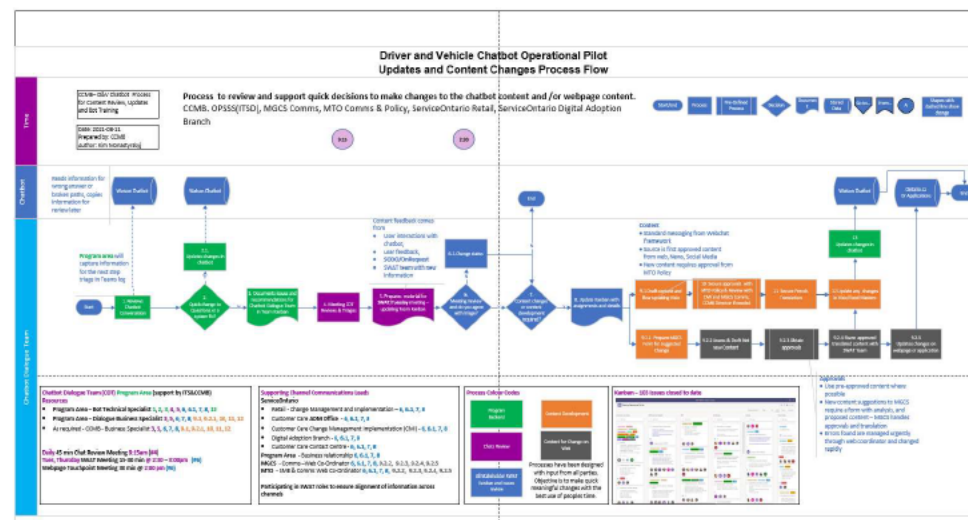
3. Be Consistent 1

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Question - Please tell us about the content update process for the Ontario.ca pages, the chatbot and the Live agent script. Are they in sync and updated at the same time?



SWAT meetings and an asynchronous Kanban has been effective in creating updates for MTO, Drive Test, MGCS, ServiceOntario, Web, Social Media, Applications, and Contact Centre and ensure updates are synced – new content channels can be included.



Approval process has been developed and will continue to evolve with ServiceOntario transformation.

Approved public content can be added to the chatbot.

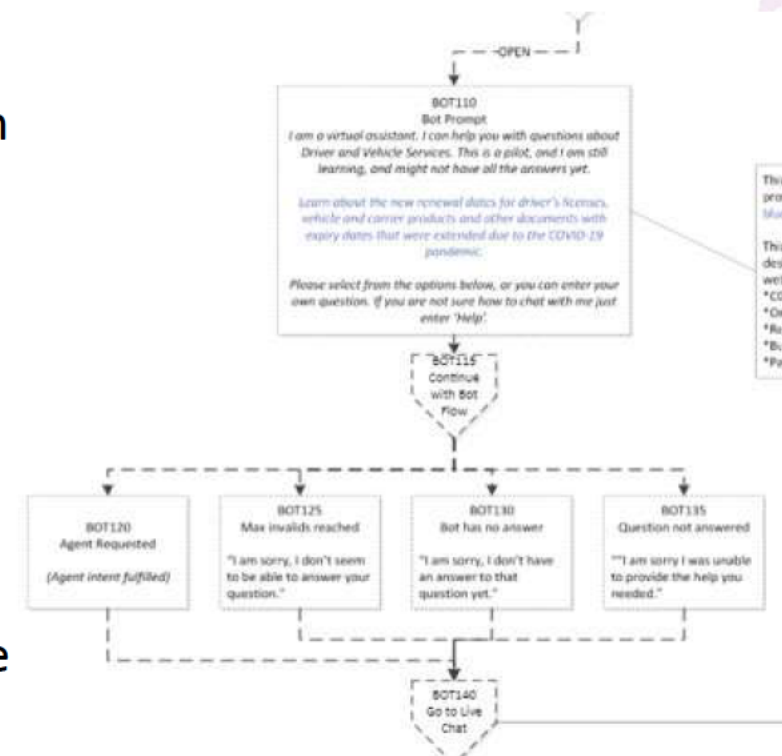
New content and requests are submitted to MPBSD Comms for approval by MTO policy.

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3. Be Consistent 3

Question - When are users referred to a live agent?

- Users **can ask to speak to an agent** right from the start and at any time during the conversation with the bot by typing any of the questions that match to the “agent” intent in the bot.
- People are **directed to an agent for complex questions** that a chatbot “knows” it cannot answer **or** if they answer “No” - they did not get the answer they are looking for.
- When a user **asks a question that bot can’t answer** they can try again. On second attempt the user is transferred to an agent.

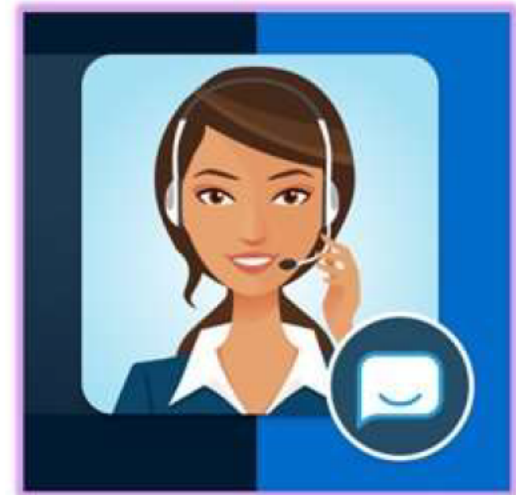


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3. Be Consistent 3 continued

Question - Are they able to request a live agent from the very beginning of the chat?

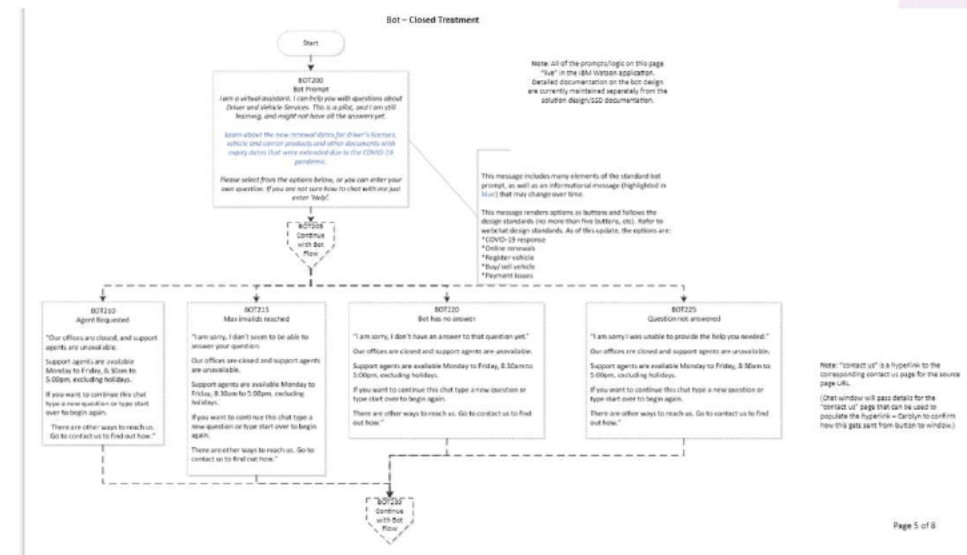
- Yes, during office hours users are informed up front that live support agents are available, and the user can ask to speak to an agent right from the start of the conversation.
- If they ask for help, the bot can guide them to ask for a live agent.



3. Be Consistent 3 more

After hours request for a live agent

- When users begin a conversation with the bot after hours it states up front that live support agents are not available (and states when they are available).
- If a user requests to speak to an agent during the conversation, they are reminded that agents are not available.
- They can continue the conversation with the bot if they wish to do so.



3. Be Consistent 4

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Question - When you conduct the demo, please show us how the front-end transitions to the back end to staff view and how it is used and touch points.

- The demo demonstrated both the **citizen and agent view**

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4. Design the Service from Start to Finish – Question 1

Question - Can you elaborate on what the division of the responsibility will be between your team and the new ServiceOntario team? Now that ServiceOntario is in-charge of the chatbot, how will the content/NLU training data be updated?

ServiceOntario

- Daily audit, training, monitoring of the chatbot content
- Issues management, new content updates, approvals, and translation
- Monitoring through the reporting in ICE, IBM Watson, Dashboard
- Planning for new lines of business and webpage placement
- Page 12 for more detail

DEEP

- Participate in weekly issues and content meetings
- Technical supports and upgrade for EP, IBM Watson, Reports
- Project support for adding new lines of business; webpage analysis, gathering business requirements, technical design and implementation
- Business relationship management

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4. Design the Service from Start to Finish – Question 2

Question - What kind of support will you be providing to the ServiceOntario team after the transition over?

Ongoing Support

- Like a contact centre or IVR, we continue to provide technical and relationship support to the chatbot team
- If there are issues put in ticket and let the relationship manager know
- CCOPs with work with our vendor
- We attend daily chat meetings for flow to Live Chat and Conversational IVR

Expansion beyond initial scope

- Any expansion to LOB requires Live Chat to be offered before Chatbot as per [Web chat guidance - InsideOPS \(ontario.ca\)](#)
- There is an established process to update any new business requirements

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4. Design the Service from Start to Finish – Question 3

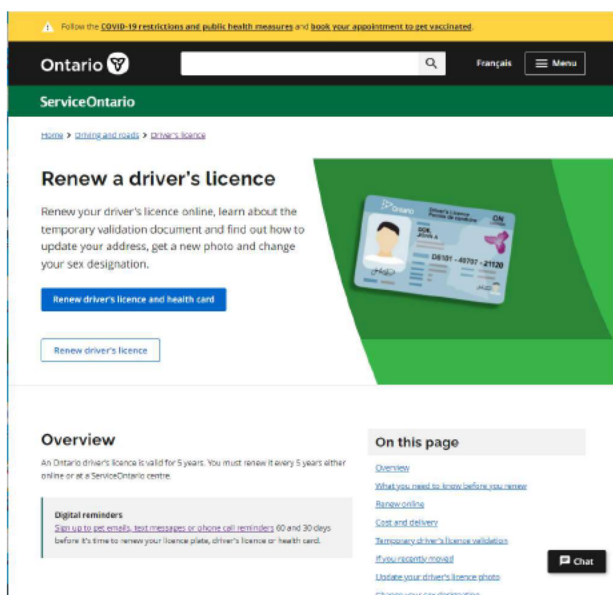
Question - How will you ensure a smooth onboarding for new team members?

Agent Training

- **SO training has a robust** onboarding and training process for CSRs
 - This includes the business training team for line of business and systems
 - As part of the established training process participants are asked to provide anonymous feedback after each training session
 - This is reviewed and used for improvements
- **DEEP has also developed and is piloting training** for live chat
 - This will be refined for improvements with ongoing delivery
 - To be shared with ServiceOntario to insert their own operational processes

4. Design the Service from Start to Finish – Question 5

Question - How will this integrate with the planned video service?



- Eventually people may access all three using the chat window for chatbot, live chat, and video chat
- This is not currently in scope, as the plan is:
 - Test this video service by screening and inviting people
 - Integrate Live Chat with chatbot for D & V
 - Evaluate the pilots, use cases and platforms before moving forward in partnership with ServiceOntario and their business requirements

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6. Test the end-to-end service – Question 1

Question - It seems like the team does daily audits, how often are updates made? What is the scope of testing involved with each release and how do you make sure the changes aren't impacting the accuracy of the bot for other intents?

Currently for Chatbot

- Daily audits are done with the chatbot and result in daily updates.
- Typically you test other questions previously asked in the changed intent to ensure the intent is not impacted.
- Its not a traditional DEV to UAT to Prod setup – in bot world you go from DEV/UAT to Prod (DEV/UAT is a single environment)

Live Chat

- Process to be established as part of the project

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6. Test the end-to-end service – Question 2

Question – Can you elaborate more on your regression testing? What's the scope included and are the utterances used to test the intents from real users?

IBM Watson (for Chatbot)

- Traditional regression testing is used for introducing a new flow of new content when adding to a new webpage, there is a new initiative like VALTAG refunds, or when the need arises to split an intent to achieve better coverage.
- Updates are made to intents and questions regularly in DEV/UAT and tested and then moved to production
- Real user questions as the past 30 days conversations are always available within Watson along with records of audits

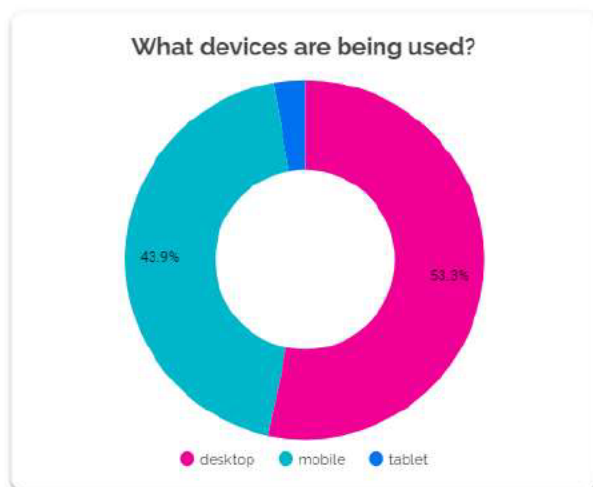
Engagement Platform

- DEEP will perform regression testing along with functional, non-functional, user acceptance testing, usability testing - as any updates are made to the application as per the regular process

7. Make it accessible and inclusive – Question

Question - Do you know what % of users are on mobile devices?

- ServiceOntario top web pages from June 5 – July 5, 2022



- We are able to determine the mobile use to the level of the webpage
- Currently the information does not roll up to the EP or IBM Watson
- With over 50% of user pressing buttons – this action is easier on mobile

Source [ServiceOntario web performance dashboard](#)

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8. Be agile and user-centred – Question

Question - How will you get feedback from people running the service (e.g. live agents) to improve the back-end process?

- **ServiceOntario has a system in place for all staff to participate in improvements**
- All staff are encouraged to use the “Operational Improvement Form” on the staff pages in Sharepoint
- **Issues of technical nature** would be logged and managed by our CCOps team
- **During projects**
 - seeking feedback from the point person embedded in this operation
 - staff focus groups and meetings held

9. Use open standards and common platforms – Question 1 (GSiC)

Question - Where does the data come from for the service?

Data for live chat is part of the engagement platform.

- As chat contacts are received, data is written to our common database. This is also where we store "feedback."
- When contacts are queued and routed to agents, additional data is stored in the "MMR tables" including information like time in queue, duration of chat with agent, etc.

9. Use open standards and common platforms – Question 1b (GSiC)

Engagement Platform

The engagement platform's reporting tool allows the client and support staff to access out of the box contact centre reports and standard chat reports.

Contact Centre Reports:

Queue Contact User Time Report,
Queue Contact Time Report:

- These reports provide useful information such as the "grade of service," the percentage of chats answered within 45 seconds.

Queued Contacts Summary Report:

- Shows percent of users that left the chat before speaking with an agent.

Standard Chat Reports:

Chat Feedback Reports:

- Provide information including feedback scores and "chat satisfaction," broken down information such as source page, agent, or bot.

Chat Feedback Comment Reports:

- Show comments left by users along with their feedback rating.

9. Use open standards and common platforms – Question 2 (GSiC)

Question - What is the process for getting information into the service?

- Live Chat "Canned Responses"
 - The web chat framework provides a standard set of responses that can be used to provide a consistent user experience across OPS chat solutions, and these are loaded to the system during the project along with any other specific responses that have been developed/vetted during the project.
 - Canned responses can be used by the agents to respond quickly and consistently.
 - Over time responses can be deleted, modified, added as the need arises.
 - Once in operational mode, ServiceOntario will submit a SODO request to update canned responses, and the change by DEEP support staff involves updating "iceBar configuration."
 - Once the change is complete it can be accessed by all live agent staff.

11. Support those who need it – Question 1 & 2

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Question - How will live agents be trained?

Question - Are there any training feedback loops available to improve responses?

4. Design the Service from Start to Finish – Question 3

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Question - How will you ensure a smooth onboarding for new team members?

Agent Training

- **SO training has robust** onboarding and training process for CSRs
 - This includes the business training team for line of business and systems
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 - To be shared the ServiceOntario to insert their own operational processes

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12. Measure performance – Question 1

Question - With live chat coming, is the chatbot worth maintaining?

In short YES - the chatbot:

- **Answers questions 24/7**, is a way to quick self-serve, and is giving the right answer 91% of the time
- **Has inspired future developments** both operationally, and for other digital products
- **This is a voice of the customer** tool for issues and content needs assisting communication across all service channels
- **Supported the sticker refund program** identifying questions by the public and issues with information:
 - How to apply?
 - Where is my cheque? – my neighbour has theirs
 - Why is my cheque so big/small/wrong
 - I have lost or damaged my cheque
 - Inconsistency on the webpages about renewals in-person and online
- **Live Chat is not a 24/7 operation**

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12. Measure performance – Question 2

Question - What will it cost to maintain? What's the ROI?

- It costs 1.5 – 2.0 FTE to maintain the chatbot for the current volume
- Uses a consumption based model based on number of chats – dependant on the platform
- Since users are anonymous you cannot follow them through the full service to the phone or in-person, therefore the ROI is based on assumptions
 - Calculations with assumptions support an increased capacity at the Contact Center that is equal to the effort that it takes to maintain it.

12. Measure performance – Question 3

Question - Have you set KPIs and targets for the live chat feature?

- **The chatbot dashboard** has KPIs for satisfaction, effectiveness, adoption – submitted for DFA
- **Live chat - the objective** is to answer questions fully with no calls to the dedicated chatbot line - calls should go close to zero
- **ServiceOntario has sophisticated measurements groups** that will input to this
- Benchmark KPIs
 - Satisfaction – *from standard Chat Feedback reports*
 - calls from the chatbot
 - chat resolution time
 - first response time
 - Average wait time in queue
 - Webpage visits to chat and live chat
 - Missed chats

Benchmark chat key performance indicators can be used by all contact centers to measure the success of the implementation:

- Grade of Service (GOS) of 80% or greater for chat queues - Target Average Speed of Answer for a chat contact is 45 seconds. Standard reports show the contact centre's adherence to the target with Grade of Service (GOS). To find grade of service look to these reports:
 - Queue Contact User Time Report
 - Queue Contact Time Report
- Chat Satisfaction Rate of 80% or greater – Chat Feedback Report tracks the number of web users that submitted a feedback rating. A score of 4 or 5 counts towards the satisfaction rate.
- Chat queue Abandonment Rate of 5% or less – Abandoned chats are web users that were waiting in queue but closed the chat window before they connected to an agent. Standard reports show the percent of the abandoned contacts for a given queue (i.e. out of total contacts offered to the queue). The contact centre can look at this statistic to determine adherence to the KPI. To find percent abandoned for a queue look to these reports:
 - Queue Contact User Time Report.
 - Queued Contacts Summary Report

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12. Measure performance – Question 4

Question - Please share any details on how you are planning to measure success for the new feature.

During the project - Phase II – Live Chat (to be confirmed by the Project Team)

- **Daily review** of Chats for quality and accuracy
- **Look for**
 - Increase in satisfaction
 - Less calls from the chatbot
 - Decreasing chat resolution time
 - Quicker first response time
 - Impact on other channels
 - Issues and tickets
- **Typically recommend using the feedback** to understand the voice of the customer
- **ServiceOntario has sophisticated measurements groups** that will input to this

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12. Measure performance – Question 4b

Question - Please share any details on how you are planning to measure success for the new feature.

The standard approach sees the project team collaborating to document in the solution design how success will be measured, including metrics, measures, baseline measurements, target approach, and reporting cycle. This work has been initiated and will be reviewed as ServiceOntario re-engages in the project:

A draft excerpt:

The project team has defined key performance indicators that will measure the success of the chat deployment. These KPIs allow the team to measure how well the objectives are being met (i.e., looking back to the business analysis, is the pain point addressed or the opportunity achieved?):

Problem statement: Improve the experience in the current D & V chatbot for people who are looking to quickly self-serve for information, or to get reassurance on what they find online about Driver and Vehicle services.

To measure the improvement of the customer experience with the implementation of the D & V Live Chat the team will take three months of metrics (% Satisfied from the Chat Feedback Report, and Early Abandons) to form a baseline in which to measure the success of the project.

The goal will be to the measure metrics % Satisfied increased and decrease in the Early Abandon rate. This would an indicator that the project has Improved the Customer Experience from that of the current D & V Chatbot.

The KPI belongs here (e.g. % Satisfied from the Chat Feedback Report and “Early Abandons – see the spreadsheet) and would be good to have details on how we are getting the baseline.

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Appendix

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Webpage Deployment:

- **5 D&V webpages** in both French and English were selected for pilot
- **2 New pages** for Licence plate refund initiative
- **Jan 25, 2021** -> Register Vehicle Permit Licence Plate and Sticker (<https://www.ontario.ca/page/register-vehicle-permit-licence-plate-and-sticker>)
- **Feb 25, 2021** -> Buy or Sell Used Vehicle Ontario (<https://www.ontario.ca/page/buy-or-sell-used-vehicle-Ontario>)
- **April 8, 2021** ->
 - Renew Driver's Licence (<https://www.ontario.ca/page/renew-drivers-licence>)
 - Driver's Licence (<https://www.ontario.ca/page/drivers-licence>)
 - Payment Help: Driver & vehicle online services (<https://www.ontario.ca/page/payment-help-driver-and-vehicle-online-services>)
- **April 1, 2022** ->
 - Renew Licence Plate Sticker (<https://www.ontario.ca/page/renew-licence-plate-sticker>)
 - Get a refund for your licence plate sticker (<https://www.ontario.ca/page/get-refund-or-credit-your-licence-plate-sticker-or-drivers-licence>)

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Chatbot New Webpages

New pages added on April 1, 2022

- Renew Licence Plate Sticker (<https://www.ontario.ca/page/renew-licence-plate-sticker>)
- Get a refund for your licence plate sticker (<https://www.ontario.ca/page/get-refund-or-credit-your-licence-plate-sticker-or-drivers-licence>)

- **Chats have gone from over 200 to 800 on some days** – Cheques are being received for sticker refunds
- This is spike of interest with a focus on the cheques – social media is potentially driving the people to question their cheque amounts

Top of questions

- How to apply?
- Where is my cheque? – my neighbour has theirs
- Why is my cheque so big/small/wrong
- I have lost or damaged my cheque
- Inconsistency on the webpages about renewals in-person and online

'No's" because?

- Need to **speak with an agent** - Personal answers not in scope or chatbot ability
- **No public statements** telling people how they are being distributed, some believe it is the Birthday, others the alphabet
- **Social media and uncertainty** fuel the questions about the amount not being correct